



NAVY DEPARTMENT

BUMED NEWS LETTER

a digest of timely information

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No. 2

Dysenteries and Diarrheas, Diagnosis and Treatment: Importance of the dysentery problem cannot be overemphasized. A battle which could be won by a force in good health might be lost by one badly hit with dysentery. Dysentery and malaria rank high as dangerous and potent enemies. Let's fight them! Knowledge is the first move in the battle. Every Naval Medical Officer should be letter perfect in his dysentery facts.

1. A high incidence of dysenteries can be expected among troops in the field, particularly when they are engaged in active operations, since frequently the food and water supply can not be protected adequately against fecal pollution. Under these conditions when preventive measures can not be effectively applied and since there is no satisfactory method of immunization against the dysenteries, early diagnosis and prompt treatment become of utmost importance in their control.

2. Diagnosis: Laboratory facilities for diagnosis of dysentery, bacillary and amoebic, are usually not available on ships nor in combat zones ashore. It therefore frequently becomes necessary to make the diagnosis on epidemiological and clinical features, and by the use of specific drugs. For this purpose, it is particularly important to note these features:

(a) Bacillary dysentery is far more common than amoebic dysentery. Even in areas where dysenteries and diarrheas are very common, less than 10 per cent are of amoebic origin.

(b) Bacillary dysentery is epidemic; amoebic dysentery sporadic. Whenever an epidemic of dysentery or diarrhea breaks out, it should be assumed that it is of bacillary, rather than of amoebic origin. Under

conditions of very gross fecal pollution of food or water, the frequency of amoebic dysentery may approach epidemic proportions. This is rare. Outbreaks of so-called food poisoning caused by Salmonella, Streptococci, and Staphylococci must be kept in mind. They can usually be recognized by their relation to the ingestion of infected food.

(c) Bacillary dysentery, when severe, is a prostrating disease associated with high fever, leukocytosis, severe toxic effects. Amoebic dysentery on the other hand, even though severe with 15 to 20 bowel movements a day, is usually a "walking dysentery" associated with relatively mild constitutional symptoms.

(d) The stools of bacillary dysentery are mostly sero-sanguinous pus with albuminous odor, while the stools of amoebic dysentery consist of a foul-smelling mixture of feces, blood, and brownish, jelly-like mucus. Keep in mind, however, that the stools of both bacillary and amoebic dysentery frequently are not dysenteric with blood and mucus, but rather diarrheal watery stools, with very little mucus and no gross blood. In some epidemics caused by Shigella flexneri, S. sonnei, and S. newcastle, very few cases may reach the dysenteric blood-and-mucus stage; they are epidemics of bacillary diarrhea rather than bacillary dysentery. Similarly amoebic dysentery frequently is rather amoebic diarrhea, and it is practically always so for 1-3 weeks before becoming a dysentery.

(e) Should the above features not appear sufficiently diagnostic, the therapeutic test, by emetine, should be resorted to without delay or hesitancy. Emetine hydrochloride 0.06 gram (1 grain) should be given subcutaneously on 2 successive days. If amoebic in nature, there will be a striking improvement within 24 to 48 hours so very apparent to both the patient and medical officer that its recognition can hardly be overlooked. For practical purposes, no exception to the diagnostic effect of emetine need be considered.

3. Treatment: Effective and curative remedies for both bacillary and amoebic dysentery are now available.

(a) Bacillary dysentery.

- (1) Sulfaguanidine. - Initial dose 6 grams (90 grains), then 3.5 grams (52-1/2 grains) every 4 hours night and day until the number of stools per day is reduced to 5 or less, then 3.5 grams (52-1/2 grains) every 8 hours night and day until the stools have been normal for 4 days.

If there is no improvement within 4 days after the initial dose, discontinue the drug.

The sulfaguanidine tablets should be crushed and given with water. While taking the drug, an adequate water intake is necessary to prevent kidney damage.

- (2) If sulfaguanidine is not available, use sulfathiazole or sulfadiazine, preferably the latter. Initial dose 3 grams (45 grains), then 1 gram (15 grains) every 4 hours night and day. If improvement occurs in 3 days or sooner, reduce to 1 gram, 3 times daily and continue until stools have been normal for 4 days. Keep in mind the necessity for an adequate fluid intake.

Note: Recent observations indicate that sulfadiazine, rather than sulfaguanidine, should be the first choice, at least for S.flexneri, S.sonnei, and S.newcastle.

- (3) In severe cases, fluids intravenously are usually required to relieve dehydration and acidosis. Plasma may also be used but not until dehydration is completely relieved.
- (4) Anti-sera. An antitoxic serum for Shiga infections is now available. It is monovalent and should be used only when the Shiga bacillus (Shigella dysenteriae) has been shown to be the cause of the dysentery.
- (5) To relieve the abdominal pain and insure rest, bismuth subcarbonate (level teaspoonful q. 3 to 4 hours), camphorated tincture of opium, codeine, or morphine are recommended.
- (6) Vitamins, particularly B and C, should be given freely to replace the loss incident to the disease, to hasten recovery, and to strengthen resistance against recurrences.

(b) Amoebic dysentery.

- (1) Emetine hydrochloride, 0.06 gram (1 grain) subcutaneously once a day for 5 days.
- (2) Beginning on third day of the emetine therapy, give carbarsone 0.25 gram by mouth 3 times a day for 7 days.
- (3) After an interval of 7 days, give vioform 0.25 gram or pulvis chiniofoni (yatren) 1 gram (15 grains) by mouth 3 times a day for 7 days.
- (4) After another interval of 7 days, repeat the course of carbarsone 0.25 gram 3 times a day for 7 days.

Note: When no gastro-intestinal irritation or other toxic effects of these drugs develop, the interval between the courses may be shortened or eliminated.

(c) Amoebic abscess.

In the presence of amoebic dysentery, amoebic abscess of the liver must be kept in mind. With typical symptoms this complication can usually be readily recognized, but frequently the clinical picture is obscure with such indefinite symptoms as a run-down condition, loss of weight, some fever, and perhaps slight pain over the liver.

Emetine is a specific for amoebic abscess. Give emetine hydrochloride 0.06 gram (1 grain) subcutaneously daily for 8 to 10 days. If necessary and if toxic effects (chiefly myocardial damage) do not preclude, repeat at intervals of 15 to 20 days. When 6 doses of emetine have been given, start treatment for eradication of the parasite in the intestines by means of carbarsone and vioform as outlined. Two courses will suffice unless dysentery is present.

Aspiration may be required for large abscesses; open operation must be the last resort. (E.G.H.)

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Medical officers are referred to the Surgeon General's letter of November 13, 1942 on the subject of dysenteries, their diagnosis and treatment. Though much of the above summary repeats the reference letter, there is one important additional piece of information; (paragraph, 3 (a) 4) antitoxic serum for Shiga infections is now available.

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Carrot Diet Protects Experimental Animals in Altitude Tests: In the experiment reported upon a group of rats were kept for 10 days on a diet of nothing but fresh carrots and tap water. They were then put in a low pressure chamber simulating the atmospheric conditions of 30,000 feet altitude for two hours. Of 107 carrot-fed rats, 85 survived the oxygen lack at this simulated high altitude, whereas only 23 of 107 rats on a normal diet survived.

The experimenters warn against conjecturing, from facts obtained under one condition of oxygen lack and altitude, what would happen in different conditions, but state that clear-cut results of acute studies are valuable in suggesting possibilities to be verified in chronic and less severe states.

Experiments are now under way to find what factors in carrots are responsible for their protective effect against high altitude oxygen lack. (Nelson, Goetzl & Ivy - Science News Letter - Mar. 6, '43)

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Shark Repellents: Preliminary tank tests conducted at Woods Hole, Massachusetts, indicated the repellent property of some substance contained in decomposing shark flesh. Upon concentration and analysis, it appeared that the component responsible for this repellent action was ammonium acetate. Because preliminary tests also suggested that copper might possess repellent properties, copper acetate was selected for test at sea.

Before these substances became available, sharks had left Florida waters. Arrangements were therefore made for an expedition to the Gulf of Quayaquil, December 6, 1942 - February 10, 1943.

The investigators have now concluded that "there can be no doubt that copper acetate diffusing at a rate of 0.1 lbs. per hr. or more is a complete shark repellent under the field conditions under which the experiments were conducted." (Springer, McBride, Todd & Schmidt, OSRD report)

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Post-graduate Instruction in Epidemiology and Malarial Control: The note appended to the Bureau's letter of February 19th on the above subject, reprinted in the Bumed News Letter of March 5th, read "Epidemiology and Malarial Control quota has been filled." Further need for medical officers in this specialty has arisen. There will probably be place for approximately 20 additional officers. Applications for the course as announced in the Bureau's letter are therefore invited.

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Study of the Absorption of Sulfa Drugs: Data indicate that oral administration before meals in the fasting state results in greatest absorption. When given as the sodium salts orally before a meal, the levels of drug attained and the total amount recovered in the urine were almost similar to those obtained from intravenous injections. After a meal, absorption was reduced and retarded. Peritoneal absorption of the sodium salts was rapid and nearly complete with sulfanilamide leading the other sulfa drugs. (J. Clin. Inves. Sept. 1942.)

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A New Use for Wagensteen Suction Drainage: The Wagensteen suction apparatus has been used with success for thoracentesis. The advantages claimed are: it does not require constant attendance of a physician; it is easily regulated and the aspiration rate can be controlled. (Weinburg and Sperling - J. M. Soc. N. J. - Oct. 1942.)

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Yellow Fever Immunization: Error in Microfilm Letter No. 4 - Paragraph on immunization of WAVES should have read:

"It may be noted that by a recent order the WAVES have been excepted from the Navy's plan for Yellow Fever immunization of all personnel."

Yeast Treatment of Latrines: Panama Canal Department uses the following treatment of pit latrines at semipermanent and permanent camps:

Preparation of yeast for pit latrine treatment:

1. Sugar water is prepared by adding one-half teaspoonful granulated sugar, or one teaspoonful molasses or cane syrup to each quart of water.
2. One-half ounce of compressed yeast made into a paste is added to each gallon of sugar water.
3. The inoculated mixture is kept at atmospheric temperature for 18 hours. The yeast culture is then ready for use.
4. When 5 gallons or more of yeast culture is to be prepared, 2 ounces of yeast will be used to inoculate each 5 gallons of sugar solution. For fractions of 5 gallons, use one-half ounce per gallon of sugar solution.

Treatment of Latrines: One quart of prepared yeast culture should be added to each latrine hole twice weekly; for example, Tuesday and Friday of each week. Fresh cultures should be prepared the day prior to treatment of latrines.

Experience has demonstrated that when yeast treatment of pit latrines has been properly carried out, pit latrines 10 to 12 feet deep have been used continuously for 6 to 10 months with perfect digestion of deposited material.

All yeast-treated latrine boxes must be flytight and must be provided with a fly trap at each end. The fly trap must be so placed that light which attracts flies to the trap is admitted to the latrine box. (Nav. Med. Bull. Jan. '43.)

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Virus of Poliomyelitis and Rodents: Jungblat & Dalldorf report the apparent transmission of poliomyelitis virus to rodents from human cases during an epidemic at White Plains, N. Y.

These workers isolated the virus from mice, made a number of animal transfers using mice, rats, and hamsters with the production of paralysis in the rodents. (Am. Jr. Pub. H., Feb. '43.)

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Casualties Expected to Approximate Ten Per Cent: Secretary of the Navy Knox, in recent testimony before Congress estimated that the Navy's casualties would be one man in ten. He said our facilities must be prepared accordingly. (A. P. - March 3rd.)

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New Fishing Kits for Life-boats and Rafts: The Navy Department has approved two new fishing kits: one weighing about 3 pounds for life-boats, and a smaller one weighing about 1 pound for aircraft life-rafts. Both contain enough tackle to catch anything from minnows and shrimp to fish and turtles as large as survivors should dare to tackle. There are hooks, line, and pork-rind bait for small and medium-sized fish, mackerel and feather-jigs for trolling, a grapple for snagging fish and turtles, a small harpoon for larger fish and a dip net for catching minnows, crabs, and shrimps. There is also a knife with a wood handle which will keep afloat if lost overboard; a whetstone for sharpening the hooks, and gloves to protect the hands.

This selection was made on the recommendations of a group of practical experts on deep-sea fishing: Honorable Gifford Pinchot, ex-Governor of Pennsylvania; Michael Lerner, Field Associate in Ichthyology for the American Museum of Natural History; S. Kip Farrington, an author of several books on deep-sea fishing, and Captain William Hatch, famous skipper of Florida Coast fishing boats.

These experts are of the opinion that fish are there to be caught in practically every part of the seven seas; that the tackle provided will catch them, if properly used. A set of instructions printed on "Patapar", not damaged by water, is included.

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Points of Medical Interest in Navy Fishing Instructions: "If and when you have caught more fish than you can eat, squeeze out the juice of the flesh and drink it. Fish juice tastes much like the juice of raw oysters and clams. It has been tested and found safe." The test referred to was a controlled experiment with human volunteers, and indicated that fish juice can maintain individuals in fairly normal salt and water balance for several days.

Men are warned against eating the livers and flesh of sharks, skates, and rays unless there is plenty of water available. These cartilaginous fishes are poikilo-osmotic, with body fluids of nearly the same salt concentration as sea water. Crabs, shrimp, and plankton are also poikilo-osmotic.

Men are advised to use turtle fat or the oil that may be obtained by exposing the fat to the hot sun. This accords with several reports that fat is a very acceptable food when thirst is extreme; with the findings of recent animal experiments conducted by Dr. L. E. Holt, Pediatrician, Johns Hopkins Hospital on water requirements in various diets. Holt found that fat-fed rats required little water, about a third the amount needed by those protein-fed, one-half that needed by the carbohydrate-fed rats. He has offered the explanation that water is needed to excrete the urea of metabolized protein; carbohydrate requires a considerable amount, though less, for maintenance of tissue isotonicity. Fat, on the other hand, is transported as an emulsion or suspension; does not materially alter osmosis; requires no water to maintain isotonicity. (E.G.H.)

Maxillary Fracture Appliance as designed by Commander R. W. Taylor, (DC) U.S.N., is now available on the supply table. The new appliance weighs but six ounces; is used in conjunction with the Jelenko fracture splint. It is secured to the head by a plaster head cap. (N. Med. Bull. Jan. '42.)

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Pre-exposure fog on X-ray film caused by heat, humidity, extraneous X-radiation, or chemical fumes, can be prevented as follows:

Heat - Keep surplus film in a refrigerator, but before using, allow it to remain at room temperature at least overnight. Sudden temperature change may condense moisture on the film emulsion.

Humidity - Wrap the packages of surplus film in wax paper; seal edges with adhesive tape.

X-radiation - Should cause no difficulty unless the refrigerator is close to X-ray apparatus and in the direct path of rays.

Chemical Fumes - Those most injurious to X-ray films are formalin, hydrogen sulphide, hydrogen peroxide.

Attention to the above details will prolong the useful life of X-ray film, improve the quality of the radiographs.

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Dental-Visual Education: The Naval Dental School, Bethesda, Maryland, had made, through the cooperation of the Bureau of Medicine and Surgery, a number of motion pictures for dental education. These motion pictures are for loan to Naval dental activities.

These films include:

1. U.S. Naval Dental Officer - 800 ft.: Indoctrination film; the dental officer's duties, opportunities, training, equipment and service afloat.
2. Duties of a Dental Technician - 400 ft.
3. Oral Hygiene - 400 ft.: Simple rules of oral hygiene.
4. Oral Surgery - Routine naval dental practice.
5. Full Denture Prosthesis - 1600 ft.: Closed mouth technique for impressions, centric relation and transfer of jaw movements, the processing and finishing of dentures.
6. Partial Denture Prosthesis - 800 ft.: Construction of partial maxillary and mandibular dentures.

7. Factors Concerned in the Construction of Full Maxillary and Mandibular Dentures - 1200 ft.: Taking of the impressions, action of the muscles of the mouth, and finishing of the dentures.
8. Operative Dentistry - 800 ft.: Modern method of compound cavity preparation with amalgam restoration of tooth structure.
9. Jaw Fractures - 900 ft.: Single and compound mandibular fractures, procedure in reduction and fixation of maxillary fractures.
10. Indirect Technique for the Precision Construction of Crown, Bridges and Inlays - 1000 ft.: Detailed technique using hydrocolloid impression material.
11. Process of Dental Caries - 400 ft.: Animated story of tooth decay.

Application for loan of these films may be made via official channels to Chief of the Bureau of Aeronautics, Training Film Section.

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Sulfa Drugs in Aviation: The attention of flight surgeons is particularly directed to BuM&S circular letter of January 25, 1943, regarding restrictions and precautions in the use of these drugs. Recent researches indicate that there is a significant loss in altitude tolerance following the administration of 3 to 5 gm. of sulfathiazole. The loss of altitude tolerance from this dosage varies from 2,000 to more than 3,000 feet. It is also known that occasionally sulfa compounds result in impaired sensory perception and impaired judgment.

Aviators and aircraft crew members should not be permitted to participate in flights until at least two days after the oral administration of the last dose. This restriction does not apply to passengers or patients being transported by air.

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Propamidine Effective in the Presence of Pus (A.P. March 3, 1943, quoting Lancet): One of the most serious deficiencies of bacteriostatic sulfa drugs is their failure in the presence of pus.

Sulfa drugs are bacteriostatic when within the organism they replace para-amino-benzoic acid. The latter appears to be an essential in the enzyme system of bacteria, and might be termed a bacterial vitamin. Without it organisms do not grow and multiply because of this "vitamin deficiency".

Where protein is being broken down (pus, blood, plasma or other tissue protein) so much para-amino-benzoic acid is liberated that few bacteria are fooled by the sulfa drugs whose parent substance is of course sulfanilamide (para-amino-benzene-sulfonamide). If propamidine proves effective in pus, it is indeed an advance.

Anti-inhibitors of the Sulfa Drugs: Para-amino benzoic acid (sometimes called PAB) is recognized as one of the principal inhibitors of the sulfa drugs.

Current research gives promise of effective anti-inhibitors.

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The Clinical Use of Penicillin: The antibacterial agent, penicillin, produced by the mold penicillium notatum, was discovered by Fleming in 1929. In 1940, the Oxford investigators (Chain, Florey and others) reported briefly on their work with penicillin. This substance was found by them to be active in inhibiting the growth of streptococci and staphylococci as well as anaerobic organisms associated with gas gangrene.

During the past two years Herrell and Heilman have investigated the antibacterial activity of penicillin and confirm to a large degree the data presented by the Oxford workers. They have also compared the activity of penicillin with another antibiotic agent, gramicidin. Both substances were found to be of the same order of activity against strains of gram-positive cocci although there are well marked differences in the selective bacterial activity of the two substances. Penicillin, however, has been found superior to other germicides tested because of its low toxicity for tissue. Penicillin possesses the advantage that it is bacteriolytic for certain organisms and at the same time not hemolytic. Bactericidal amounts of penicillin may be administered locally or subcutaneously without evidence of toxicity.

Possible Clinical Use of Penicillin: On the basis of present evidence it would appear that the substance should be most useful in the treatment of infections of Staphylococcus aureus, Streptococcus pyogenes, Diplococcus pneumoniae, Neisseria gonorrhoeae, and Neisseria intracelluaris as well as organisms associated with gas gangrene. At present the gram-negative pathogens do not appear to be inhibited to a degree which would justify use of the material in treatment of infections due to these organisms. Because penicillin appears rapidly in the urine, it should prove valuable in the treatment of infections in the urinary tract caused by susceptible organisms. It is, perhaps, in the treatment of overwhelming systemic infection due to some of the pathogenic organisms mentioned early in this paragraph that penicillin may be most effective.

The technical difficulties in preparing the material have to some degree retarded widespread clinical use of penicillin. The clinical use of penicillin has not progressed so far that final statements can be made as to the best method of administering it. (Proc. Staff Meetings, Mayo Clinic, Dec. 30, 1942.)

The authors report a case of staphylococcus hemolyticus infection arising in nostril with septicemia, treated intravenously with pyrogen free penicillin for 8 days. He recovered.

As indicated, penicillin is not yet available for general distribution.

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Bacterial Toxic Agents: In the annual report of the Philadelphia Biochemical Foundation, Dr. Ellice McDonald summarized the results of investigation on bacterial toxic factors. In the early work on the pneumococcus, specific polysaccharide fractions were found in the capsule of each type. Polysaccharide is the determining fraction in the specific antigenic bacterial substance. These "sugary" compounds then serve to armor the organisms against the defense mechanisms of the body which they are invading. It will be remembered that when the specific polysaccharide is removed from the pneumococcus capsule, it loses type specificity, and most important, virulency.

Polysaccharides in Vaccines: The discovery that the principle of specific polysaccharides applies to other organisms as well as to pneumococci is made of further importance by the probable application of this principle in the development of vaccines. It had previously been necessary to inject the organism or major fractions of the bacterial proteins. This has often produced protein sensitization with the phenomena of allergy or anaphylaxis. Should the specific polysaccharide be employed as an immunizing agent, now apparently possible, such undesirable reactions may be avoided. Specific antigenic stimulation may then produce higher specific immunity.

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Injury Factor Common to all Inflammatory Exudates: Vally Menkin from the Department of Pathology, Harvard University Medical School, reports in the February 12th issue of Science the isolation of an euglobulin fraction which has been christened "necrosin". The untreated exudate per se induces, when injected into rabbits, a severe edematous inflammation characterized by lymphatic blockage. Fractionization of the exudate has yielded in the euglobulins "necrosin", capable by itself of reproducing in an even more marked manner (undoubtedly due to the concentration and purification of the material) a picture similar to that produced by the whole exudate. The recovery of "necrosin" from exudates offers a reasonable explanation for the injury pattern revealed in inflammatory reaction.

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Food Poisoning: Remember the danger of food poisoning. Emergency rations prior to or during combat operations should be prepared so as to prevent its development. Chopped and minced meat, eggs and similar filling for sandwiches may be contaminated with organisms capable of producing severe prostrating food poisoning. Rats often harbor the Salmonellae (food poisoning) group. Cockroaches may transfer bacteria from feces to food. Some men

are carriers of the offending organisms. Feces contaminated hands are the link here. Enterotoxic staphylococci may come from a furuncle or minor skin wound in a food handler. Of course, there are many organisms which do not produce food poisoning (more properly thought of as food infection). But, introduce a "bad bug", distribute well through the food mass, provide a good culture medium, keep warm, and the trap is set. A man on the latrine or in the head can't operate a gun!

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Typhus in the Russian Army: "Suffice it to say that during the last winter, army formations and units had to face real danger of typhus infection, this disease being widespread in the army of the German invaders. The danger has become intensified since the lice-infected German army affected the local population ----." (Medical Service in the Red Army - Zavalishin - Milit. Surg. Feb. '43.)

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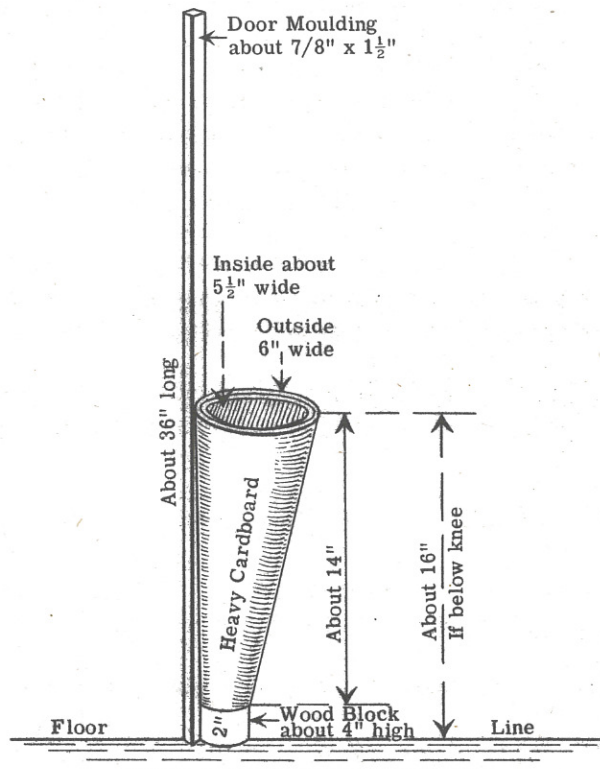
Bureau of Medicine and Surgery Form Letters reprinted in this issue of the Bumed News Letter:

1. Subject: Food, Inspection, Preparation and Preservation of.
(Jan. 21, 1943). ---- pages 14 & 15
2. Subject: Sulfonamide Drugs, Restrictions and Precautions in the
Use of. (Jan. 25, 1943). ---- page 16
3. Subject: Treatment of Venereal Diseases Aboard Submarines.
(Jan. 26, 1943). ---- page 17
4. Subject: Reports of Medical Survey in the Cases of Men Inducted
into the Navy or Marine Corps. (Feb. 1, 1943). ----
page 18
5. Subject: Medical Officer Personnel. (Mar. 5, 1943) ---- page 19

Temporary Prosthesis Following Lower Limb Amputations: In cases with lower limb amputation, after complete healing of the stump, a temporary prosthesis which is comfortable, easily adjusted and requires no exact fitting, should give a great deal of comfort.

Such a prosthesis was suggested by Captain G. E. Henschen, MRC (Ret) who saw this method in use during the first World War at a Danish military hospital in Paris, France.

It consists of a truncated cone of heavy cardboard which fits fairly snugly over the amputation stump. A laterally attached strip of wood, to which a webbed strip is fastened, is used for securing it around the waist and a heavy wooden plug fitted into the smaller end of the cone to give a solid base for weight bearing.



It is believed that such a temporary prosthesis should be especially useful in below the knee amputations. It requires no trained personnel for its manufacture and, using cardboard scrap, would cost practically nothing.

Many amputation cases develop marked mental reaction which can be greatly helped by making them ambulatory early, yet not dependent upon crutches. It is believed that this type of temporary prosthesis will be found useful during the period of early locomotion, while awaiting shrinkage of the stump, before the permanent artificial leg can be fitted.

BUREAU OF MEDICINE AND SURGERY

From: The Chief of the Bureau of Medicine
and Surgery.

Y:hs
L16-8(011)
January 21, 1943

To: All Ships and Stations.

Subject: FOOD, Inspection, Preparation, and Preservation of.

References: (a) Navy Regulations: Articles 1140, 1156, 1157, 1159,
1320, and 1323.
(b) Manual of the Medical Department, 1939, paragraph 2608.

1. Medical officers are charged with definite responsibilities with regard to food which are covered in references (a) and (b).
2. These responsibilities have been increased as the result of the following developments:

(a) The recent change in the Navy ration from a food allowance to a money allowance.

(b) The frequent necessity under conditions of war for extended cruises in the course of which the supplies of fresh fruits, vegetables, eggs, and dairy products become unavoidably exhausted.

(c) The careless cooking of vegetables may result in the loss of significant amounts of vitamin C and of thiamine, and remaining on the steam table or in the warming oven over a period of time may result in further losses of these important substances. A recent study showed that in the careless cooking of string beans as much as 45 percent of the vitamin C and 35 percent of the thiamine was destroyed, and that 2 hours of standing on the steam plate destroyed an additional 30 percent of the vitamin C and 35 percent of the thiamine.

(d) The discovery of the fact that deficiency of vitamin A may measurably reduce night vision.

(e) The addition of certain vitamin-rich packaged foods such as lemon juice, powdered and synthetic; yeast; and powdered whole milk.

(f) The addition of multivitamin capsules providing per capsule approximately one-half the recommended daily intake of vitamin A, thiamine, riboflavin, niacin, and vitamin C for distribution upon the medical officer's recommendation. These capsules may be procured from the Naval Medical Supply Depot under the following designation:

<u>Stock No.</u>	<u>Status</u>	<u>Item</u>	<u>Unit</u>	<u>Estimated price</u>
S1-4633	T	Vitamins, multiple, tablets or capsules containing Vitamin A: 2,500 USP units; D-200 USP units; B1-1.0 mg.; B2-1.5 mg.; C-37.5 mg.; nicotinic acid amide, 10.0 mg.....	100 bot.	.90

3. It is strongly urged that all Medical Officers in cooperation with the Supply Department be constantly on the alert for breaks in technic and departures from the recommended methods for the preparation of food.

ROSS T. McINTIRE

BUREAU OF MEDICINE AND SURGERY

From: The Chief of the Bureau of Medicine
and Surgery.

P3-2/JJ47(011)

Y-ab

To: All Ships and Stations.

January 25, 1943

Subject: SULFONAMIDE DRUGS, Restrictions and Precautions in the
Use of.

1. The Bureau wishes to bring to the attention of all medical officers that in addition to renal complications and other untoward effects, it is known that the oral administration of sulfonamide drugs may result occasionally in visual disturbances, impaired sensory perceptions, and impaired judgment. Evidence is accumulating that mild mental confusion, coordination defects, and other insidious manifestations may be caused by these drugs.

2. The oral administration of sulfonamides to those on a duty status should be undertaken only after careful consideration of the duties and responsibilities of the patient.

3. Aviators and aircraft crew members shall not be permitted to participate in aerial flights until at least two days after the oral administration of the last dose. Where symptoms or signs persist beyond this period, at least two days should be allowed after their disappearance before return to a flying status. This does not apply to passengers or patients being transported by air.

ROSS T. McINTIRE

BUREAU OF MEDICINE AND SURGERY

From: The Chief of the Bureau of Medicine
and Surgery.
To: All Ships and Stations.

P3-1/P3-2(012)
Y-hjc
January 26, 1943

Subject: TREATMENT OF VENEREAL DISEASES ABOARD SUBMARINES.

Reference: (a) Manual of the Medical Dept., U.S.N., Par. 1281.

1. It is the opinion of this Bureau that known or suspected cases of active venereal disease should not be retained on board submarines.
2. Clinical cases of gonococcus infection, urethra, that develop after sailing may be treated by the pharmacist's mate if transfer is not practical. Recommended treatment is a single course of sulfathiazole by mouth, gram 1, four times a day every four hours for five days until a total of twenty grams is administered. (If sulfathiazole is not available, any other sulfa preparation may be used.) Patients should be encouraged to drink large quantities of water while receiving this treatment. It is understood, of course, that this drug will be discontinued if there are any complications or untoward effects. If a clinical cure is not secured or if there is a recurrence, further sulfathiazole therapy should not be attempted. Resistant cases and those developing complications should be hospitalized as soon as practicable.
3. Treatment with sulfathiazole or other sulfonamide drugs should be undertaken with due regard to the security of the ship, which may be involved because of impaired sensory perceptions, visual disturbances, mild mental confusion, or other insidious manifestations. Occasionally, these disturbances may persist two days or longer after treatment and may not be recognized by the patient.
4. It is believed that no treatment other than normal saline dressings should be undertaken in those who develop open genital lesions after sailing. Partial and irregular antisyphilitic treatment results in difficulty and uncertainty in later diagnosis when adequate facilities are available. Cases of this kind should be transferred as soon as practicable in accordance with Reference (a).
5. It is urged that facilities to provide venereal-disease prophylaxis for exposed personnel be made readily available and that the crew be instructed in their use.

ROSS T. McINTIRE

BUREAU OF MEDICINE AND SURGERY

From: The Chief of the Bureau of Medicine
and Surgery.
To: All Ships and Stations.

R:JLA
P3-5 (021)
February 1, 1943

Subject: REPORTS OF MEDICAL SURVEY in the Cases of Men Inducted Into
the Navy or Marine Corps, Forwarding Extra Copies of.

References: (a) Paragraph 3423(1), Manual of the Medical Department.
(b) Paragraph 3423(i), Manual of the Medical Department.

1. The directive of reference (a) that when recruits with less than 6 months service are surveyed, an extra copy of the report shall be prepared in each case and forwarded to the recruiting office where the man was enlisted is hereby modified in the cases of registrants inducted into the Navy or Marine Corps.

2. When registrants inducted into the Navy or Marine Corps are recommended for discharge from the service by Boards of Medical Survey for conditions found to have existed prior to acceptance for service, an extra copy of the report in addition to those required by reference (b) shall be prepared. This copy shall be forwarded to the Naval Training Station, Naval Construction Training Center, or Marine Corps Recruit Depot to which the man first reported for active duty except in those cases in which the man was admitted to the sick list from one of these training activities with the diagnosis for which discharge is recommended.

ROSS T. McINTIRE

Navy Department
BUREAU OF MEDICINE AND SURGERY
Washington, D. C.

March 5, 1943.

From: The Chief of the Bureau of Medicine and Surgery.
To: Commanding Officers, Naval Hospitals; Senior Medical Officers, Naval and Marine Corps activities; Medical Officers in Command, and Senior Medical Officers, Naval Dispensaries.
Subject: Medical Officer Personnel.

1. In view of the acute shortage of medical officer personnel in the Navy, and the fact that recruitment of medical officers for the Naval Reserve has now been decreased to a number which indicates it will not be possible to approach the minimal number of medical officers required for the care and treatment of Navy and Marine Corps personnel and dependents, it is necessary to reduce the allowance of medical officers in all existing activities within the continental limits of the United States. This will make it necessary to decrease the ratio of medical officers in naval hospitals, naval training stations, dispensaries, and other naval activities.

2. In order that the Bureau may be in a position to establish a ratio of medical officers for Medical Department facilities, you are requested to submit to the Bureau, without delay, a list of medical officers considered to be key men in your organization. In preparing this data, it is suggested it be based upon the fact that Medical Officers in Command, Executive Officers, interns and those under instruction be excluded from the ratio. It is anticipated that naval hospitals will be reduced to one medical officer for each forty patients; naval training stations, air stations, etc., one medical officer for each five hundred personnel attached to the activity concerned; and dispensaries one medical officer for each fifteen hundred dependents.

3. It will be necessary, in the near future, to relieve a large number of medical officers serving at sea and on assignments beyond the continental limits of the United States, and medical officers of all ranks, from Lieutenant (junior grade) to and including Captain, will be utilized for this purpose.

4. Please expedite forwarding of list of key men to the Bureau.

ROSS T. McINTIRE

